

CEQA Environmental Checklist Form

1. Project title

Amendment to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins for the Control of Salt and Boron Discharges to the Lower San Joaquin River Basin.

2. Lead agency name and address

California Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

3. Contact person and phone number

Matthew McCarthy, Environmental Scientist (916) 464-4658

4. Project location

San Joaquin River Watershed: the San Joaquin River from Friant Dam to the Airport Way Bridge near Vernalis

5. Project sponsor's name and address

California Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

6. General plan designation

Not applicable

7. Zoning

Not applicable

8. Description of project

The Regional Board is proposing to amend the Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins. The purposes of the proposed amendment are 1) to add methods to calculate salt load limits for land areas that discharge to the San Joaquin River from Mendota Dam to the Airport Way Bridge near Vernalis and 2) to adopt an implementation strategy to achieve these load limits.

9. Surrounding land uses and setting

The areas impacted by this basin plan amendment include the San Joaquin River watershed downstream of Friant Dam and upstream of the Airport Way Bridge near Vernalis. The watershed boundary, clockwise from the Airport Way Bridge, follows the Stanislaus River to Caswell Park. From Caswell Park, the boundary follows a ridgeline north to the fork of the Main District Canal east of Ripon and on to the South San Joaquin Main Canal to the intersection with Woodward Reservoir. The boundary continues along the drainage divide between Woodward Reservoir and Littlejohns Creek, and then along the South San Joaquin Main Canal, and the North Main Canal. Just past the intersection of North Main Canal and Littlejohns Creek, the boundary follows the divide between the San Joaquin Main Canal and

Littlejohns Creek to the Stanislaus County line. The east boundary of the watershed follows the eastern edge of the Stanislaus and Merced County lines. Where the Merced County line meets the Madera County line, the boundary follows the CALWATER boundary to the San Joaquin River at Friant Dam. The southern boundary of the watershed follows the San Joaquin River from Friant Dam to the Mendota Pool. Here the boundary follows the southern edge of CALWATER RBUASPW areas 654120000 (Los Banos Hydrologic Area), 654241052, 654241053, and 654241054, west to the Fresno/San Benito County line. From here, the western boundary of the watershed follows the crest of the Coast Range along the Fresno, Merced, and Stanislaus county lines. The northern boundary continues along the north side of Hospital and Lone Tree Creeks and continues along the northern edge of CALWATER 656410000 (Patterson Hydrologic Area), and then follows the gas line running northeast across the Vernalis Gas Fields, coincident with the angle of Airport Way, to the San Joaquin River at the Airport Way Bridge.

The land uses in the area include agriculture, wetlands, and urban.

10. Other public agencies whose approval is required

State Water Resources Control Board
Office of Administrative Law
U.S. Environmental Protection Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

This Environmental Checklist has been prepared in compliance with the requirements of CEQA relating to certified regulatory programs.

IMPACT	POTENTIALLY SIGNIFICANT IMPACT	POTENTIALLY SIGNIFICANT UNLESS MITIGATION INCORPORATION	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
I. AESTHETICS Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the Project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control the District may be relied upon to make the following determinations. Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

IV. BIOLOGICAL RESOURCES – Would the Project:

a) Have a substantial adverse effect, either directly, or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulators, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US fish and Wildlife Service?				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES – Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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c) Directly or indirectly destroy a unique paleontological resource of site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VI. GEOLOGY AND SOILS – Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
lii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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VII. HAZARDS AND HAZARDOUS MATERIALS – Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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plan?				
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY – Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which results in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which exceed the capacity of existing or planned stormwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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drainage systems or provide substantial additional sources of polluted runoff?				
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING – Would the Project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES – Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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to the region and the residents of the state?				
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. NOISE – Would the Project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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XII. POPULATION AND HOUSING – Would the Project?

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

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☐
☒

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

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c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

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XIII. PUBLIC SERVICES

a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

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Police protection?

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Schools?

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Parks?

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Other public facilities?

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XIV. RECREATION

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that

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substantial physical deterioration of the facility would occur or be accelerated?				
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. TRANSPORTATION/TRAFFIC – Would the Project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio to roads, or congestion at intersections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion/management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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XVI. UTILITIES AND SERVICE SYSTEMS – Would the Project?				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the Project have the potential to degrade the quality of the environment, substantially	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

THRESHOLDS OF SIGNIFICANCE

For the purposes of making impact determinations, potential impacts were determined to be significant if the proposed project, or its alternatives would result in changes in environmental condition that would, either directly or indirectly, cause a substantial loss of habitat or substantial degradation of water quality or other resources.

1.1 Discussion of Environmental Impacts

Analysis of potential environmental impacts is based on possible changes to water and drainage management practices to comply with the proposed regulations. Potential practices are described in Section 4.4.2 and Appendix 2. Expanded discussion is included only for checklist questions answered Potentially Significant Impact, Less than Significant with Mitigation Incorporation, or Less than Significant Impact.

I. Aesthetics

Possible changes to water and drainage management practices by agricultural and wetland dischargers to comply with the proposed regulations would not alter any scenic vistas, damage scenic resources, degrade the visual character of any site, or adversely affect day or nighttime views.

II. Agricultural Resources

The project would not convert farmland to non-agricultural uses as no changes to land use designations are being sought. Agricultural dischargers may use a variety of water and drainage management practices, discussed in Section 4.4.2 and Appendix 2, or other potential strategies to comply with the proposed Basin Plan Amendment. Such practices are unlikely to lead to conversion of farmland to non-agricultural uses, though some agricultural dischargers may choose to use agricultural lands to reuse, store, or treat recycled drainage water. Any facilities constructed to comply with the provisions of the proposed Basin Plan Amendment are considered as appurtenant to agricultural operations and therefore an agricultural use. Furthermore, agricultural dischargers have a wide range of options available to comply with the proposed Basin Plan Amendment. Management practices employed to comply with the proposed Basin Plan Amendment may occur at the farm scale, district scale, or basin-wide scale. Specific projects implemented to comply with the proposed regulation would need to be evaluated by the implementing entity, as necessary.

Costs to dischargers have been minimized through selection of the most cost effective implementation alternative in section 4.4.8. The recommended alternative requires the least amount of drainage treatment (except for the no action alternatives-which has been determined to be inconsistent with the goals of the project), this should minimize the burden to farmers and any potential effects on agriculture. Specifically, the proposed control program provides flexibility to agricultural dischargers by allowing dischargers to comply with real-time load allocations, and encourages the use of pollutant trading to meet load allocations. Additionally, supply water credits are provided to dischargers that receive elevated salt in their water supply. These supply water credits reduce the economic and operational impacts of the control program on irrigators that receive a degraded (higher salinity) water supply. The compliance time schedule ranges from 8 to 16 years for dry through wet year types, and is extended to 12 to 20 years for critically dry year types. This allows time for farmers to develop cost effective implementation strategies that have the lowest possible impact on agricultural productivity and the least agricultural costs. Furthermore, the availability of federal and state government funds for environmental conservation (e.g., EQIP, Proposition 13 and Proposition 50 funds) should allow growers to offset some of their costs, if they choose an approach that requires a greater capital investment. Although no direct impacts to agricultural resources have been identified, the mitigation described above has been included in the proposed control program to reduce potential impacts to agricultural resources.

III. Air Quality

Possible changes to water and drainage management practices would not have any effect on air quality.

IV. Biological Resources

Compliance with load allocations would likely result in a reduction in wetland and agricultural drainage returns flows to the LSJR. The most pronounced reduction in drainage return is expected during low-flow conditions when the assimilative capacity of the LSJR is lowest. Agricultural return flows make up a large fraction of the total flow in Mud Slough, Salt Slough and the LSJR upstream of the Merced River during low-flow conditions. A reduction in return flows would exacerbate the impacts of low-flow conditions in certain agricultural ditches, sloughs, and reaches of the LSJR. Decreased flow during low-flow conditions may result in a number of adverse impacts, including a reduction in the wetted perimeter of affected reaches. These impacts could reduce the quantity of habitat for aquatic and riparian-dependent organisms, which include a number of potentially affected state and federally-listed special status species (e.g., Giant Garter Snake, California Red-Legged Frog, Western Yellow-Billed Cuckoo, Bald Eagle, Swainson's Hawk) (USBR, 2002). This impact would be reduced downstream of the Merced, Tuolumne, and Stanislaus River confluences with the LSJR as agricultural drainage becomes an increasingly smaller percent of LSJR flow.

Portions of the TMDL project area are located within the known range of the Fall/Late Fall-run Chinook Salmon; however, adverse impacts to this federal candidate species (also a state Species of Concern) are not expected as a result of the proposed project. According to National Marine Fisheries Service Chinook Listing Status Maps (1999), the drainage areas of Mud Slough, Salt Slough and the LSJR upstream of the Merced River are not located within the current known range of the species. In fact, the California Department of Fish and Game actually installs barriers on the LSJR near the mouth of the Merced River to route Fall-run Chinook Salmon up the Merced River during the spawning season (USBR, 2000).

Potentially significant impacts resulting from reduced return flows have been identified above. There are a number of factors unrelated to this project, however, that have a greater influence on return flows to the LSJR.

Agricultural return flows are largely a function of the acreage of the area drained and volume of applied water. During droughts, less water is applied to a smaller area, and as a result the volume of drainage generated and eventually returned to the LSJR is reduced. Periods of drought correspond to the lowest flow conditions in Mud Slough, Salt Slough, and the LSJR. In the case of droughts or drier water years, return flows to the LSJR would be substantially reduced even in the absence of the proposed project.

There are a number of planned and ongoing projects or activities that will also act to reduce the volume of drainage to the LSJR. For example, an existing TMDL for selenium in the LSJR is being implemented through a waste discharge requirement on the Grassland Bypass Project. The waste discharge requirements impose load allocations for selenium discharges from the San Luis Drain, which is major source of flow to Mud Slough during the irrigations season. Implementation of selenium load allocations already results in decreased flow in Mud Slough. It is important to note, however, that selenium is a trace mineral (commonly found in subsurface drainage from the west side of LSJR watershed) that can be toxic to fish and wildlife.

The USBR's San Luis Drainage Feature Reevaluation Project (USBR, 2001, USBR, 2002) is another ongoing program that will potentially affect the quantity and quality of

agricultural drainage returns to the LSJR. The USBR has a legal obligation to provide drainage to an 81,000-acre drainage-impacted area within the Grassland Subarea known as the Grassland Drainage Area (GDA). Subsurface drainage from the Grassland Subarea is the principal source of flow in the San Luis Drain. The USBR is currently evaluating 3 options for providing drainage to the GDA. All three options involve capture and redirection of the agricultural drainage originating from the GDA. The San Luis Drainage Feature Reevaluation Project will therefore result in a reduction of flow to Mud Slough and the LSJR even if the proposed control program is not implemented.

The proposed project, the selenium TMDL, the San Luis Feature Reevaluation Project, and ongoing voluntary efforts by farmers and wetland operators are all expected to result in a reduction of irrigation return flows to the LSJR. As discussed above, there are potential adverse impacts associated with reduced flows. The potential flow-related effects of these ongoing and planned projects are overlapping rather than cumulative since each project could reduce the same drainage sources. The potential adverse impacts of reduced flows are partially offset by the environmental benefit of removing agricultural drainage from the LSJR. Agricultural drainage is one of the largest pollution sources in the LSJR watershed. Both this proposed project and the selenium TMDL have been designed to protect or restore the beneficial uses of the LSJR, including irrigation supply, domestic supply, and fish and wildlife habitat.

Agricultural water conservation practices and out-of-basin water transfers greatly influence the quantity and quality of return flows to the LSJR. Water conservation practices involve a reduction in the amount of water applied to crops that makes water available for other uses (including expansion of crop acreage). Implementation of water conservation practices results in decreased drainage returns. Water supplies made available through water conservation is frequently used as justification to transfer water to an out-of-basin use; this action removes water from the LSJR watershed. These out-of-basin water transfers usually involve an economic benefit to the water rights holder who transfers the water. The proposed project may prompt dischargers to implement water conservation practices specifically to reduce drainage to comply with load allocations. A portion of the water made available through implementation of water conservation practices could be used to increase the assimilative capacity of the LSJR (increase flow) or for other environmental purposes. As part of the proposed project, the Regional Board will work with the State Water Board to ensure that out-of-basin water transfers do not have a deleterious effect on the LSJR and to the extent possible, identify and act on opportunities to provide increased flow to the LSJR.

Possible changes to water and drainage management practices applied to managed wetlands would likely have an effect on the management of federally protected wetlands. State, federal, and privately managed wetlands will need to adopt water management practices that may include changes in the timing of discharges of ponded wetland water. The mix of habitat types within wetland complexes may need to be changed to reflect changes in the timing of wetland draw down to meet load. Proposed changes to wetland operations or the construction of new facilities would be subject to a separate CEQA analysis by the appropriate lead agency.

Four alternatives were considered in the development of the proposed control program. The no action alternative was determined to be inconsistent with goals of the project, as it will not result in water quality improvement. Of the remaining three alternatives, the alternative with the least potential to reduce flows (potentially affecting biological resources) was selected. Though no direct impacts on biological resource have been identified, mitigation has been incorporated in the proposed control program to reduce potentially significant effects on biological resources. The recommended alternative includes mitigation since it allows and encourages the use of real-time management, instead of more conservative fixed base load allocations, as a mechanism to achieve water quality objectives. Real-time management requires dischargers to manage saline discharges and freshwater flows based on real-time conditions, thereby reducing the need to retain drainage. The recommended alternative will therefore result in the smallest potential reduction in LSJR and tributary flows and therefore the least potential to adversely affect biological resources. Additionally, by allowing dilution flow to be used to increase assimilative capacity, the control program encourages increased flow of lower salinity water in the LSJR and its tributaries. The proposed control program also includes policy statements that recommend that the State Water Board continue to use its authority to condition water rights on the attainment of existing and new water quality objectives. The State Water Board has already conditioned water rights of the USBR on attainment of salinity water quality objectives in the SJR near Vernalis. To the extent that this salinity control program could result in reduced flows, these water rights may need to be further conditioned by the State Water Board.

V. Cultural Resources

Implementation of the proposed Basin Plan Amendment would not likely to affect cultural resources.

VI. Geology and Soils

Implementation of the proposed Basin Plan Amendment would not affect the geology of the region and would not expose people to additional geologic hazards. Water and drainage management practices implemented by agricultural dischargers to comply with the proposed regulation may, in fact, reduce soil erosion and loss of topsoil that is occurring in the project area.

VII. Hazards and Hazardous Materials

Implementation of the proposed Basin Plan Amendment would not create hazards or affect handling of hazardous materials.

VIII. Hydrology and Water Quality

The purpose of the proposed Basin Plan Amendment is implementation of a program to comply with existing water quality objectives through reduction and changes in timing of salt and boron loading to the San Joaquin River. It is anticipated that management practices employed by agricultural and wetland dischargers to comply with the proposed regulations would, in fact, result in improved water quality with regard to salinity and boron concentrations.

Implementation of the proposed Basin Plan Amendment is not likely to result in violation of water quality standards or waste discharge requirements or deplete groundwater supplies. Changes in the timing of discharges to the San Joaquin River by agricultural

and wetland dischargers may alter existing flow patterns but they are unlikely to result in erosion, siltation, or flooding. Implementation of the proposed regulation is unlikely to affect stormwater drainage systems, provide additional sources of polluted runoff, substantially degrade water quality, have an effect on flood flows, or increase the chance of inundation by seiche, tsunami, or mudflow.

Management practices employed to comply with the proposed Basin Plan Amendment may occur at the farm, district, or basin-wide scale. Specific projects implemented to comply with the proposed regulation would need to be evaluated for its effects on hydrology and water quality by the implementing entity, as necessary.

Drainage re-use could potentially have an effect on groundwater resources. Operation of new drainage re-use facilities would likely result in increased percolation and groundwater recharge and therefore not adversely affect the production rate of any nearby wells. Drainage re-use, however, has the potential to adversely effect groundwater quality through surface water application and resulting percolation of high salinity drain water, and through leaching of minerals from the soil profile. Construction and use of evaporation ponds could have a similar impact on groundwater quality if they are not properly designed. Background information on groundwater resources in the LSJR watershed is given in Appendix A (Section 1.3 of the technical TMDL report). In general, Groundwater quality is poorer on the west side of the LSJR compared to the east side, and in many areas the groundwater currently exceed secondary drinking water MCLs for salinity.

The Grassland Subarea contains some of most salt-affected lands in the LSJR watershed. This subarea is also the largest contributor of salt to the LSJR (approximately 37% of the LSJR's mean annual salt load). Previous studies indicate that shallow groundwater in the LSJR watershed is of the poorest quality (highest salinity) in the Grassland Subarea (SJVDP, 1990). As mentioned above, the USBR has a legal obligation to provide drainage GDA. The USBR's San Luis Drainage Feature Re-evaluation Plan Formulation Report (2002) indicates that their In-valley Disposal Alternative (which calls for drainage reduction through re-use and other means) would "... have a beneficial impact on groundwater salinity relative to the no-action alternative" (cessation of drainage by 2010). Additionally, an existing TMDL for selenium and its implementing WDR establishes progressively stricter load limits for drainers in the GDA. Therefore, drainage re-use and evaporation facilities in some form, will likely be used by dischargers, in cooperation with the USBR, to address ongoing drainage issues in the Grassland Subarea independent of this Basin Plan Amendment.

Potential impacts to groundwater quality have been minimized by selecting the implementation alternative that allows the maximum amount of drainage to be discharged to the river, thereby reducing the amount of drainage that needs to be re-used or evaporated. Additional mitigation can be incorporated into the design of re-use facilities to minimize or eliminate potential impacts to groundwater quality. Placement of shallow tile drains, for example, below re-use facilities can be used to intercept and isolate high percolating drainage before reaching underlying aquifers. Any evaporation and re-use facilities constructed to comply with proposed regulation would be designed and permitted to minimize impacts on groundwater resources. The proposed regulation does not authorize the construction of any new re-use or evaporation facilities and any

such projects would be subject to a separate CEQA analysis by the appropriate lead agency. The proposed Basin Plan Amendment would therefore not have a substantial impact on groundwater quality.

IX. Land Use and Planning

Implementation of the proposed Basin Plan Amendment should not result in any changes in land use or planning (see section II above for discussion of Agricultural Resources).

X. Mineral Resources

Implementation of the proposed Basin Plan Amendment should have no effect on mineral resources.

XI. Noise

Agricultural and wetland dischargers would likely make changes to their water and drainage management practices to comply with the proposed regulations. These practices, such as those described in Appendix 2 should not lead to any increase in exposure to noise

XII. Population and Housing

Implementation of the proposed Basin Plan Amendment would not directly or indirectly induce population growth in the area, displace existing housing, or displace people.

XII. Public Services

The proposed Basin Plan Amendment would not have an impact on public services.

XIV. Recreation

There should be no increase in use of parks or recreational facilities or the need for new or expanded recreational facilities as a result of this proposed Basin Plan Amendment.

XV. Transportation/Traffic

The proposed Basin Plan Amendment would not have an impact on transportation or traffic.

XVI. Utilities and Service Systems

The proposed Basin Plan Amendment includes limits on loads of salt and boron from wastewater treatment plants. Load limits from wastewater treatment plants are set at current loading rates so the proposed regulation would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Agricultural and wetland dischargers, in order to comply with the proposed regulations, may chose to treat or dispose of drainage water. Agricultural and wetland dischargers would be responsible for the construction and assessment of the environmental impacts of any treatment systems.

XVII. Mandatory Findings of Significance

The purpose of the proposed Basin Plan Amendment is to implement existing water quality objectives through load reductions and changes in timing of discharge of salt and

boron. Implementation of the proposed Basin Plan Amendment would therefore likely result in improved quality of the environment with respect to reduced salt and boron concentrations in the San Joaquin River. Future Basin Plan Amendments will establish new water quality objectives for salt and boron, at which time additional salt and boron load reductions will be required. Other Basin Plan Amendments will likely establish new water quality objectives for other pollutants such as pesticides and other control programs to comply with new or existing objectives. The cumulative impacts of these additional regulations will be evaluated at the time of these future Basin Plan Amendments.

CEQA Summary

The salt and boron water quality impairment in the LSJR has occurred, in large part, as a result of large-scale water development coupled with extensive agricultural land use and associated agricultural discharges in the watershed. LSJR flows have been severely diminished by the construction and operation of dams and diversions and the resulting consumptive use of water. Most of the natural flows from the Upper San Joaquin River (SJR) and its headwaters are diverted at the Friant Dam via the Friant-Kern Canal to irrigate crops outside the SJR Basin. Diverted natural river flows have been replaced with poorer quality (higher salinity) imported water from the Sacramento-San Joaquin Delta (Delta) that is primarily used to irrigate crops on the west side of the LSJR basin. Surface and subsurface agricultural discharges are the largest sources of salt and boron loading to the LSJR; and river water quality is therefore heavily influenced by irrigation return flows during the irrigation season. Agricultural beneficial uses in the LSJR, downstream of the Airport Way Bridge near Vernalis, are adversely impacted by the poor quality of LSJR water. Municipal and agricultural beneficial uses are also potentially adversely impacted due to the contribution of LSJR water to the State and federal water projects in the Delta. The Delta supplies drinking water for 22 million people and irrigation supply to approximately seven million acres of irrigated land.

In the 1995 *Water Quality Control Plan for the San Francisco Bay/Sacramento San Joaquin Delta Estuary* (Bay Delta Plan), the State Water Board adopted salinity WQOs for the LSJR at the Airport Way Bridge near Vernalis. The salinity water quality objective was established to protect the most salt sensitive beneficial uses of the LSJR, which include irrigation and municipal supply. The State Water Board implemented the salinity water quality objective primarily through Water Right Decision 1641 (D-1641) which in part, conditioned the USBR's water rights on attainment of salinity water quality objectives at the Airport Way Bridge near Vernalis. Despite conditions contained in D-1641, salinity remains a long-term water quality problem in the LSJR. The purpose of the proposed control program is to implement, through salt load reductions, the existing salinity WQO established by the State Water Board. No new water quality objectives are proposed.

The Regional Board's Basin Planning process is a certified regulatory program that is exempt from preparing an Environmental Impact Report. As such, the environmental impacts (both direct and indirect) have been analyzed in the supporting staff report completed in lieu of an Environmental Impact Report, per Section 21080.5 of the California Public Resources Code. As required by CEQA, the staff report, which serves as a substitute environmental document, includes a description of the proposed activity with alternatives to the activity, and mitigation measures to minimize significant adverse effects of the activity on the environment.

The proposed control program establishes policies, which will require dischargers to either limit salt discharges to the LSJR or establish a management program that will result in achieving the existing salinity water quality objectives. The regulations do not prescribe a means by which dischargers must comply; it therefore is not possible to evaluate the potential impacts of the individual projects that dischargers will carry out to comply with the proposed regulation. The environmental analysis did not identify any direct impacts on the environment associated with proposed regulation. However, potential impacts have been identified which are associated with actions that dischargers may take to comply with the proposed regulation. Specifically, the environmental analysis identifies potential impacts to biological resources if flows are reduced as a result of a reduction in municipal discharges and irrigation return flows to the LSJR.

Potentially adverse environmental effects have been minimized by selecting the alternative that will provide dischargers with the maximum flexibility to comply with the control program while providing assurance that the salinity water quality objective will be met. By allowing and encouraging dischargers to use real-time load allocations and pollutant trading, the maximum amount of drainage to the LSJR is permitted, which minimizes the potential to reduce or restrict LSJR and tributary flows. Increased flows to the LSJR and its tributaries is also encouraged by allowing discharges to meet load allocations by providing assimilative capacity through dilution. Potential impacts caused by reduced flows (resulting from drainage reductions) can be mitigated further by the addition of fresh water flows to replace irrigation return flows removed as a result of this control program. The Regional Board does not have authority over water rights decisions and therefore cannot require releases of freshwater flows to mitigate for potentially reduced flows that may occur as a result of the control program. Instead, the proposed regulation includes the following recommendations to the State Water Board, which does have water rights authority:

1. The State Water Board should consider the continued use of its water rights authority to prohibit water transfers if the transfer contributes to low flows and related salinity water quality impairment in the Lower San Joaquin River.
2. The State Water Board should consider the continued conditioning of water rights on the attainment of existing and new water quality objectives for salinity in the Lower San Joaquin River when these objectives cannot be met through discharge controls alone.

Despite potentially significant impacts to biological resources, there is an overriding need to protect the beneficial uses of the LSJR. Additionally, the Regional Board must undertake these actions to comply with the statutory mandates contained in the Porter- Cologne Water Quality Control Act and the Clean Water Act. This control program balances the need to protect the beneficial uses of the LSJR versus the potential adverse environmental effect of reduced flows in the LSJR upstream of Vernalis.